

FIGS. 5A-5M illustrate the use of physical masking techniques to generate an array of reactants on a single substrate;

FIG. 6 displays the elements of a typical guided droplet dispenser that may be used to delivery the reactant solution of the present invention;

5 FIG. 7 illustrates an example of a Scanning RF Susceptibility Detection System which can be used to detect the superconductivity of an array of materials;

FIG. 8 is a map of the reactant components delivered to the 16 predefined regions on the MgO substrate;

FIG. 9 is a photograph of the array of 16 different compounds on the 1.25  
10 cm x 1.25 cm MgO substrate; and

FIG. 10A-10B illustrate the resistance of the two conducting materials as a function of temperature.

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## DETAILED DESCRIPTION OF THE INVENTION AND PREFERRED EMBODIMENTS

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